Hyblaea aureola sp. n. from South Thailand (Lepidoptera, Hyblaeidae) — Studies in Hyblaeidae 2[1]

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Abstract: A new species of the genus *Hyblaea* Fabricius, 1793 from south Thailand is described. *Hyblaea* ***aureola*** **sp. n.** differs markedly both phenotypically and in genitalia from all other known *Hyblaea*. The female holotype, its genitalia and the type locality are figured; deposition of the holotype is in Zoologische Staatssammlung München.

Hyblaea aureola **sp. n. von Südthailand (Lepidoptera, Hyblaeidae) — Hyblaeidae-Studien 2**

Zusammenfassung: Es wird eine neue Art der Gattung *Hyblaea* Fabricius, 1793 aus Südthailand beschrieben. *Hyblaea* ***aureola*** **sp. n.** unterscheidet sich sowohl phänotypisch wie auch genitaliter sehr deutlich von allen bisher bekannten Arten dieser Gattung. Der weibliche Holotypus, dessen Genitalstrukturen sowie der Typenfundort werden abgebildet; er befindet sich in der Zoologischen Staatssammlung München.

Introduction

The Siamese or Indochinese region which includes Laos, Vietnam and northern Thailand (Sedlag 1984, 1995), is one of the "Biodiversity Hotspots" (Mittermeier et al. 1998, Myers et al. 2000) of the world. Consequently, the region's high level of biodiversity includes a large number of Lepidoptera awaiting description, and many have already been recorded and described as new from the area in recent decades (see, e.g., Schintlmeister & Pinratana 2007, Černý & Pinratana 2009, Buchsbaum et al. 2010). Here another new species is described, belonging to the family Hyblaeidae. The specimen was collected at light in the southwest part of Thailand (Figs. 6–7). The collection site is a rainforest valley located close to the coast of the Andaman Sea.

Family Hyblaeidae

Hyblaeidae are, according to current knowledge, a small family. Currently about 20 species are known. However, the status of some species remains unclear (de Freina & Buchsbaum in press), and further revisionary work appears necessary.

The generic type species *Hyblaea puera* (Cramer, 1777), described from Suriname, is currently regarded as having a worldwide distribution, but its specific distribution is unknown as the genitalic structures show *H. puera* to be a species-complex. In literature, "*H. puera*" has been noted as serious defoliators of teak (*Tectona grandis*) (e.g., Singh 1955, Dugdale et al. 1999, Peres-Filho et al. 2002, Chandrasekhar et al. 2005 and de Menezez & Mehlig 2005), but determination of this species is probably incorrect because the taxonomic situation of the *H. puera* species-group is still unclear (de Freina & Buchsbaum in press).

So far, the early stages have been recorded from Japanese *Hyblaea* species only (Nishio 2000, 2003, Tanida 1990).

The family Hyblaeidae is mainly distributed in the world's tropical zones (Holloway et al. 2001, Robinson et al. 1994), but most of them except ca. three species in the Neotropics occur in the old world tropics in Africa and southeast Asia (Scoble 1992, de Freina & Buchsbaum in press). Four species are recorded in Australia (Shaffer & Nielsen 1996), three species are known each from Taiwan (Heppner & Inoue 1992) and Japan (Inoue et al. 1982); only one species is recorded from Korea (Kim & Son 2003) so far.

Here, another previously unknown species from Thailand is described which is clearly distinct from all other known species.

Hyblaea aureola sp. n.

(Figs. 1, 2)

Holotype ♀: S-Thailand; Phang Nga Province; Amphoe, Thai Muang; Khao Lak, Thong-Ring-Tal (8°26'50" N, 98°14'42" E), 21. vi. 2010; leg. L. Janikorn & P. V. Küppers (in coll. ZSM = Zoologische Staatssammlung München, dissection no. ZSM Hy 5152 [Fig. 3], mtDNA-COI-barcode no. BC ZSM Lep. 52534). — No paratypes.

Etymologie: The species is named *aureola* (from Latin: aureolus, -a, -um: beautifully golden) because of its beautiful coloration.

Description

♀ (Figs. 1–2): Wingspan 35 mm, length of forewing 17 mm.

Stout-bodied. Head small, dark brown, smooth scaled, Ocelli small, Chaetosemata absent. Antenna dark brown, filiform, less than half as long as forewing, scales on dorsal surface only. Proboscis without scales. Labial palpi densely scaled, porrect, whitish yellow. Patagia bright yellowish white.

Upperside: Thorax, abdomen and wings dark brown. Forewings paler apically with a dark greenish sheen in the postdiscal and tornal regions; outer margin of apex concave, not pointed and with a coarse fringe; hindwing broader than forewing, black with a large orange apical spot extending from the apex to the submarginal area.

Underside: Thorax and legs orange. Abdomen greenish black, sternits caudatus with orange yellow margins.

[1] Studies in Hyblaeidae 1: de Freina, J. J., & Buchsbaum, U. (in press): Anmerkungen zur Taxonomie der Familie Hyblaeidae mit Beschreibung der *Hyblaea mauricea* sp. n. von der Insel Mauritius (Lepidoptera: Hyblaeidae). — Spixiana, Munich (in press).

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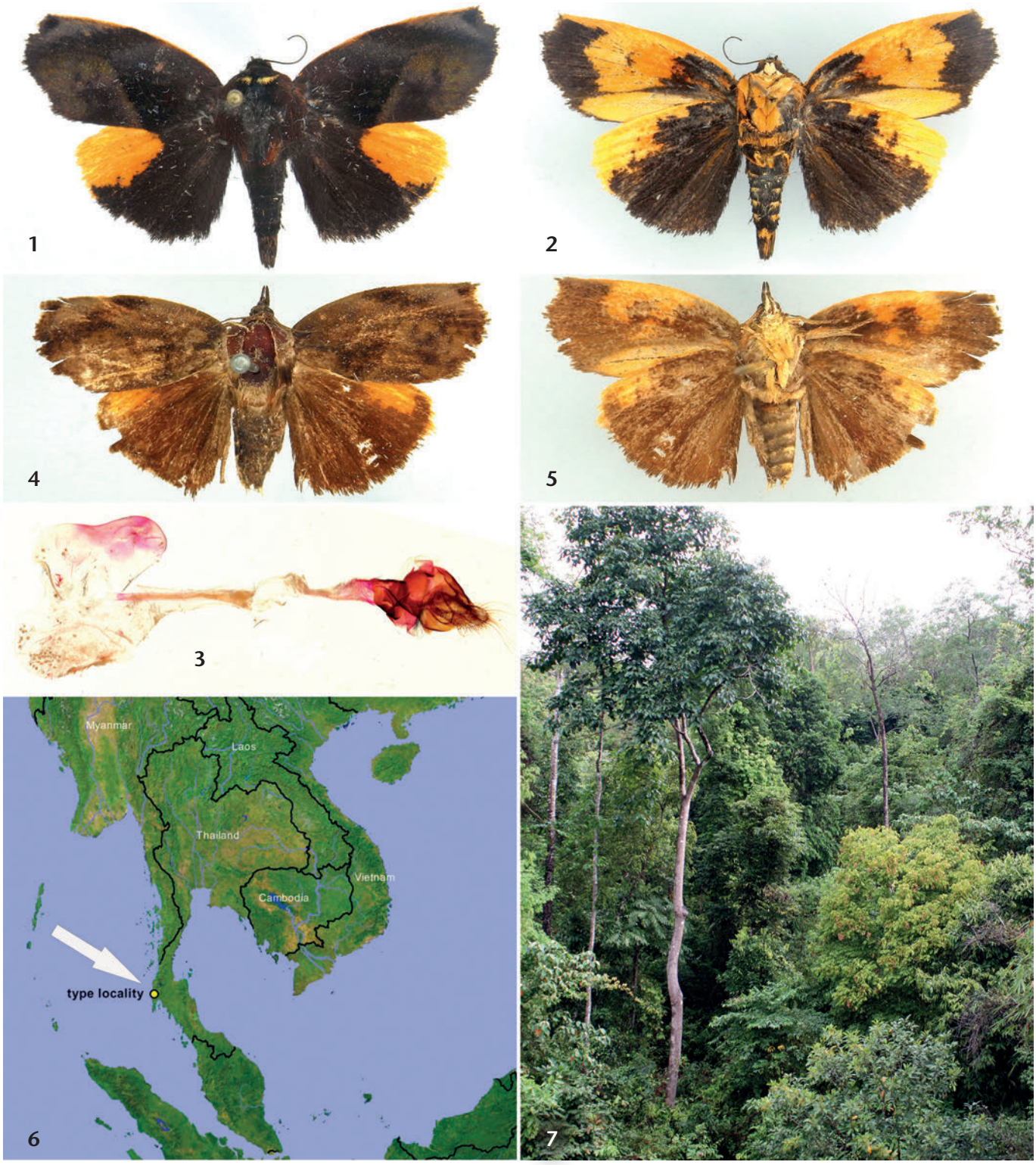

Figs. 1–3: *Hyblaea aureola* sp. n. ♀, holotype, ZSM; **Fig. 1:** upperside, **Fig. 2:** underside, **Fig. 3:** genitalia no. ZSM Hy 5152. — **Figs. 4–5:** *Hyblaea tortricoides,* Borneo; **Fig. 4:** upperside, **Fig. 5:** underside. — **Fig. 6:** Type locality of *H. aureola* sp. n. in Thailand. (Map produced with Map Creator software.) — **Fig. 7:** Rainforest at the collection site of the holotype of *H. aureola* sp. n.

Forewing basal, postbasal and marginal regions dark brownish black with a well pronounced dark brownish discal spot; apex and interspaces orange; hindwings with an orange dot at the apex and along the costa to the interspaces.

♀ genitalia (Fig. 3): Papillae anales hairy, narrow, longer than wide. Apophyses anteriores relatively short. Lamella postvaginalis strongly sclerotisized. Ductus bursae thin, less scerotizised, bursa copulatrix also less sclerotizised. The corpus bursae in the new species lacks the familiar pair of cornuti-like signa found in other known *Hyblaea;* they are replaced apically by finely spiculate, poorly differentiated structures.

Diagnosis

The only similar species is *Hyblaea tortricioides* Guenée, 1882 (Figs. 4, 5) with its very small orange dot behind the apex and along the hindwing costa. This species is recorded from East Borneo.

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Discussion

The new species is distinctly different from all other known *Hyblaea* Fabricius, 1793. A noticeable character hitherto not recorded in *Hyblaea* is the absence of signa in the ♀ genitalia. The phylogenetic status of the new species and of the previously described species *H. catocaloides* Walker, 1865 is unclear, but the authors tentatively suggest that the new species may belong to a species-group composed of *H. firnamentum* Guenée, 1852, *H. saturata* Walker, 1865, *H. amboinae* Felder & Rogenhofer, 1874, *H. tortricoides* Guenée, 1882, and *H. canisigna* Swinhoe, 1902. Chandrasekhar et al. (2008) demonstrated that this species-group is more closely related to the species-group of *H. constellata* Guenée, 1852 than to the species-group of *H. puera* Cramer, 1777. De Freina & Buchsbaum (in press) discuss the complicated taxonomic situation within the Hyblaeidae. Possibly the genus *Hyblaea* is not monophyletic, but clearly divided into species-groups.

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